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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,862	07/30/2003	Takashi Murayama	033294-014	7370
21839	7590	08/13/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			WILLIAMS, THOMAS J	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/629,862	MURAYAMA, TAKASHI	
Examiner	Art Unit		
Thomas J. Williams	3683		MGJ

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 08 June 2004.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-4 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

1. Acknowledgment is made in the receipt of the amendment filed June 8, 2004.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,194,596 to Garrett et al. in view of US 4,369,863 to Farr et al.

Re-claim 1, Garrett et al. discloses a wedge operated disc brake, comprising: a piston (interpreted as element 32, this element functions in the same manner as the piston in the instant invention) accommodated within a cylinder 26 and adapted to push a brake pad 16 toward a brake rotor 18; an actuator 12 generating a linear brake actuating input; a wedge transmission mechanism 50 has a wedge member 52, the wedge transmission mechanism is connected to the actuator so as to be driven by the linear brake actuating input which acts on the wedge member, thus converting a linear brake actuating input into a brake actuating output in the axial direction of the piston, causing the brake pad to engage the brake rotor; a resilient member (not referenced, but illustrated in figure 1 as a coil spring acting against piston 32). However, Garrett et al. fails to teach the wedge member being pulled by the actuator, but rather is pushed by the actuator.

Farr et al. teaches a wedge operated brake system that utilizes an actuator to push or pull a wedge member for engaging brake pads with a brake surface. Either system is considered functionally equivalent. It would have been obvious to one of ordinary skill in the art to have

substituted the pushed wedge member of Garrett et al. with a pulled wedge member as taught by Farr et al., the substitution of which is considered a matter of engineering choice, since both systems are functionally equivalent as taught by Farr et al., see column 5 lines 50-54.

Re-claim 2, elements 34 and 40 support the piston 32 relative to the cylinder, each are interpreted as being a bearing. A bearing is broadly interpreted as any object that supports another element.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garrett et al. in view of Farr et al. and in view of US 5,137,126 to Magnaval et al.

Re-claims 3 and 4, Garrett et al. fails to teach the actuator as being an electric motor. Magnaval et al. teaches a wedge operated brake having an actuator in the form of an electric motor. It would have been obvious to one of ordinary skill in the art to have provided the wedge operated brake system of Garrett et al. with an electric motor actuator as taught by Magnaval et al., thus reducing overall costs by eliminating fluid piping associated with a fluid actuator. Furthermore, electric systems provide increased control and accuracy over fluid systems, which are prone to leaks.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1 and 2 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kershner, Kershner et al., and Price et al. each teach wedge operated brake systems, wherein the wedge is pulled to actuate the brake. Fargier and Carre et al. each teach wedge operated brake systems actuated by an electric motor.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

August 5, 2004

THOMAS WILLIAMS  
PATENT EXAMINER

Thomas Williams  
AU 3683  
8-5-04